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EXAMINER	
WONG, XAVIER S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/577,628	DOI ET AL.	
	Examiner	Art Unit	
	Xavier Szewai Wong	2462	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27th October 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-25,28 and 29* is/are rejected.

7)☒ Claim(s) *8,9,26 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 1 and 18 have been considered but are moot in view of the new ground(s) of rejection. See **Elliott** – Elliott teaches a concept of a network moving beacon transmission periods itself to avoid collision with a newly entered user.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 10, 11, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1).

Claim 1: Nishikawa shows a radio communication method (fig. 9) comprising: a step in which when a first radio communication device detects a beacon of another network in a beacon transmission period used in a network to which the device belongs to the first radio communication device ([0109] lines 1-3: STA1 receives beacon signals from neighbouring stations), it transmits a beacon performing a collision notification which gives notice of a collision of the beacon and gives notice that the beacon transmission period of the network to which the device belongs is moved to a new time slot of the other network ([0110] lines 4-16: STA1 sends beacon signal regarding available channel communication to STA2); a step in which when a second radio communication device which belongs to the same network as the first radio communication device receives the collision notification from the first radio communication device, the second radio communication device relays and transmits the collision notification ([0111] lines 3-7: STA2 receives neighbouring beacon offset info – NBOI – beacon signal from STA1 and sends the NBOI to STA3); a step in which when a third radio communication device which belongs to the same network as the first radio communication device and the second radio communication device receives a collision notification from the second radio communication device, the third radio communication device also relays and transmits the collision notification ([0127] and fig. 9: STA2 → STA3 → STA4); a step in which the first radio communication device transmits a beacon after moving the beacon transmission period to the new time slot ([0124] lines 6-9: STA1 switches channels from time T1 to T2); a step in which when the second radio communication device receives the beacon from the first radio communication device, the second radio communication device transmits a beacon in the new beacon transmission period from that time onward ([0124] lines 9-11: STA3 (as if the *second* station, STA2) uses CH2 at T2); and a step in which when the third radio communication device receives the beacon from the second radio communication device, transmits a beacon in the new beacon transmission period ([0124] lines 11-12: STA4 (as if the *third* station, STA3) uses CH2 at T2). Yet, Nishikawa does not very particularly mention the collision notification which gives notice of a collision of the beacon and gives notice that the beacon transmission period of the network to which the device belongs "is moved to a new beacon transmission period excluding the detected beacon transmission time slot of the other network." **Elliott** teaches (a network itself) moving to a new beacon transmission period excluding the detected beacon transmission time slot of the other network (claim *11*: moving transmit slots with collisions to slots that avoid collisions and randomly reassigning transmit slots with collisions and without collisions – the examiner interprets that if a network moves transmit slots (beacon slots) with collisions by itself to slots the avoid collisions, a "new user" coming in would not have to "move itself" out of the already occupied transmit slots, and instead, be given a transmit slot (beacon slot) "on the spot"). It would have been obvious to one of ordinary skill in the art when the invention was created to, instead of using a method creating notification of the new mobile moving itself to a new beacon period, use a scheme creating notification

of the network itself move to another beacon period to give space for the new time slot as taught by Elliott to maintain traffic collisions on the network below predetermined levels (Elliott, abstract).

Claim 18: Nishikawa teaches a radio communication device (fig. 1), comprising: a beacon reception unit receiving a beacon and extracting a frame (fig. 1: reception unit 13; [0081] lines 14-20: obtains base band signals); a frame judgment unit judging whether the extracted frame is one giving notice of a collision with a beacon of another network ([0087]: TBTT offset indicator, NBOI beacon offset info are stored in each STAtion); a frame constructing unit used when said frame judgment unit has judged that the frame is a collision notification, generating a collision notification frame for relaying the collision notification ([0082] lines 3-6: base band unit produces beacon signals); and a beacon transmission instruction unit instructing transmission of the collision notification frame at the beacon transmission timing (fig. 1: transmission processing unit 14; [0082] lines 6-12: transmit beacon signals… pertaining to channel to be used). Nishikawa does not very particularly mention the notice of a collision in a beacon transmission period of the radio communication device, "the collision occurring with a beacon of another radio communication device;" and "the collision notification gives notification to the beacon transmission period is moved to a new beacon transmission period." **Elliott** teaches the notice of a collision in a beacon transmission period of the radio communication device, the collision occurring with a beacon of another radio communication device and the collision notification gives notification to the beacon transmission period is moved to a new beacon transmission period (claim *11*: moving transmit slots with collisions to slots that avoid collisions and randomly reassigning transmit slots with collisions and without collisions – the examiner interprets that if a network moves transmit slots (beacon slots) with collisions by itself to slots the avoid collisions, a "new user" coming in would not have to "move itself" out of the already occupied transmit slots, and instead, be given a transmit slot (beacon slot) "on the spot"). It would have been obvious to one of ordinary skill in the art when the invention was created to, instead of using a method creating notification of the new mobile moving itself to a new beacon period, use a scheme creating notification of the network itself move to another beacon period to give space for the new time slot as taught by Elliott to maintain traffic collisions on the network below predetermined levels (Elliott, abstract).

Claim 10: Nishikawa teaches the radio communication method according to claim 1, also comprising: a step in which when the first radio communication device detects a beacon of another network outside of the beacon transmission period used by the network to which the device belongs ([0107] and [0109] lines 1-3: neighbouring node – in another network – info received at station), it transmits a beacon for performing a beacon period notification which gives notice of the detected beacon transmission period ([0110] lines 4-16: STA1 sends beacon signal regarding available channel communication to STA2); a step in which when the second radio communication device receives the beacon period notification from the first radio communication device ([0110] lines 4-16: STA2 receives

beacon from STA1), the second radio communication device relays and transmits the beacon period notification ([0111] lines 3-7: STA2 receives neighbouring beacon offset info – NBOI – beacon signal from STA1 and sends the NBOI to STA3); and a step in which when the third radio communication device receives the beacon period notification from the second radio communication device (STA3 receives beacon from STA2 as described above), the third radio communication device also relays and transmits the beacon period notification ([0127] and fig. 9: STA2 → STA3 → STA4).

Claim 11: Nishikawa teaches the radio communication method according to claim 10, wherein when the first radio communication device performs the collision notification, it deems a time slot from which the beacon transmission period given in the beacon period notification from another radio communication device belonging the same network is removed as the new time slot to which the first radio communication device will move the beacon transmission period ([0124] lines 6-9: STA1 switches from CH1 to CH2 and from T1 to T2; figs. 14A → 14C).

Claim 19: Nishikawa teaches the radio communication device according to claim 18, wherein the collision notification frame includes information which prescribes a new time slot other than a beacon transmission period of another network as the beacon transmission period ([0109]: NBOI channel reservation), and wherein, when said beacon transmission instruction unit receives a beacon detection notification from its network at the new time slot through said beacon reception unit (fig. 1: base band unit), the beacon transmission instruction unit switches the beacon transmission timing to the new time slot ([0110]: reservation of "new" channels).

Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and in further view of Tobagi et al (US 4503533, Tobagi).

Claim 2: Nishikawa-Elliott teaches the radio communication method according to claim 1; Nishikawa-Elliott does not specifically mention the first radio communication device also includes "a lifetime of the notification in the collision notification and transmits a beacon at the new time slot within the lifetime, and wherein the second radio communication device and the third radio communication device stop relaying the collision notification when the notified lifetime has expired." Tobagi teaches a lifetime of the notification in the collision notification and transmits a beacon at the new time slot within the lifetime (col. 13 lines 14-16: transmit pilot at time-out), and wherein the second radio communication device and the third radio communication device stop relaying the collision notification when the notified lifetime has expired (col. 13 lines 16-33: abort transmission; fig. 3A-B: pilot transmission S1 → S2 → S3…). It would have been obvious to one of ordinary skill in the art when the invention was created to implement the lifetime

notification and stop relaying of notification steps as taught by Tobagi to the beacon transmission and suspension steps of Nishikawa-Elliott to reduce overhead in a relay process (Tobagi: col. 1 lines 49-54).

Claim 12: see claim 2 as they are conceptually equivalent.

Claims 3, 4, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and Tobagi et al (US 4503533, Tobagi), applied to claims 2 and 3, and in further view of Ben-Michael et al (US 5339313, Ben).

Claim 3: Nishikawa, in combination with Elliott and Tobagi, teaches the radio communication method according to claim 2; yet Nishikawa, in combination with Elliott and Tobagi, does not specifically mention "wherein the first radio communication device also includes a device ID for identifying itself in the collision notification, and wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are the same they give preference to the notification whose lifetime is larger." Ben teaches a concept of wherein the first radio communication device also includes a device ID for identifying itself in the collision notification, and wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are the same they give preference to the notification whose lifetime is larger (col. 3 lines 54-58: larger backoff client has higher priority). It would have been obvious to one of ordinary skill in the art when the invention was created to modify the preference scheme of Nishikawa, in combination with Tobagi, to give preference to the notification whose lifetime is larger as taught by Ben to guarantee successful transmission and lowering chances of further collision (Ben: col. 3 lines 31-39).

Claim 4: Nishikawa, in combination with Elliott and Ben, teaches the radio communication method according to claim 3; yet Nishikawa, in combination with Elliott and Ben, do not specifically mention "wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are different, they give precedence to the collision notification having either the maximum device ID or the minimum device ID among the device IDs, which are previously prescribed in their network." Tobagi teaches a concept of wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are different (col. 11 lines 46-53: lowest index station and highest index station), they give precedence to the collision notification having either the maximum device ID or the minimum device ID among the device IDs, which are previously prescribed in their network (col. 10 lines 45-45: lowest index station to be first

to complete transmission). It would have been obvious to one of ordinary skill in the art when the invention was created to implement steps of determining precedence by station IDs as taught by Tobagi to the beacon transmission and suspension steps of Nishikawa to reduce overhead in a relay process (Tobagi: col. 1 lines 49-54).

Claims 13 and 16: see claims 3 and 4.

Claims 6, 14, 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and in further view of Garcia-Luna-Aceves et al (US 2002/0080768 A1, Garcia).

Claim 6: Nishikawa-Elliott teaches the radio communication method according to claim 1; yet Nishikawa-Elliott does not very specifically mention "a step in which the first radio communication device transmits a beacon for performing a collision cancellation notification which gives notice that the beacon collision has been cancelled when the device does not detect a beacon of another network throughout a predetermined period of time in the beacon transmission period of the network to which the device belongs after the collision notification; and a step in which when the second radio communication device and the third radio communication device receive a collision cancellation notification, they stop moving to the new time slot in the beacon transmission period and relay and transmit the collision cancellation notification." Garcia teaches a step in which the first radio communication device transmits a beacon for performing a collision cancellation notification which gives notice that the beacon collision has been cancelled when the device does not detect a beacon of another network throughout a predetermined period of time in the beacon transmission period of the network to which the device belongs after the collision notification ([0071] lines 19-21 and 29-32: backoff... Clear-to-send packet); and a step in which when the second radio communication device and the third radio communication device receive a collision cancellation notification, they stop moving to the new time slot in the beacon transmission period and relay and transmit the collision cancellation notification ([0072] lines 30-34: any node that does not receive the Clear-to-send packet requires backoff – which signifies that node that receives Clear-to-send does not need to backoff or move to a new time slot). It would have been obvious to one of ordinary skill in the art when the invention was created to use a collision cancellation notification as taught by Garcia to be implemented in the collision detection and prevention system of Nishikawa-Elliott to avoid collision with hidden stations.

Claims 14 and 24: see claim 6 as similar concepts are disclosed.

Claim 28: Nishikawa, in combination with Elliott and Garcia, teach the radio communication device according to claim 24, wherein when said frame judgment unit

receives information of a beacon transmission period of another network which does not overlap its own beacon transmission period (when there is no collision, it is well-known that a back-off is not necessary), it records the beacon transmission period in said recording unit (fig. 1: reception unit / base band unit), and wherein when said frame constructing unit detects a beacon transmission period of another network which overlaps with its own beacon transmission period ([0106]: overlapping), the frame constructing unit generates a collision notification frame including information which sets a new time slot from which the beacon transmission period of another network and beacon transmission periods of other networks recorded in said recording unit are removed as the beacon transmission period of its network ([0124] lines 6-9: STA1 switches from CH1 to CH2 and from T1 to T2; figs. 14A → 14C,–which means old channel CH1 is "removed" from use by STA1).

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and in further view of Suzuki et al (US 5652752, Suzuki).

Claim 20: Nishikawa-Elliott teaches the radio communication device according to claim 19; Nishikawa-Elliott does not specifically mention "wherein the collision notification frame also includes lifetime information of the collision notification, and wherein said frame constructing unit counts the lifetime every time it receives the beacon transmission instruction from said beacon transmission instruction unit and generates the collision notification frame until the expiration of the lifetime." Suzuki teaches collision notification frame also includes lifetime information of the collision notification (col. 11 lines 2-3: time-out means), and wherein said frame constructing unit counts the lifetime every time it receives the beacon transmission instruction from said beacon transmission instruction unit and generates the collision notification frame until the expiration of the lifetime (col. 11 lines 3-6: suspending transmission of pilot signals at time-out). It would have been obvious to one of ordinary skill in the art when the invention was created to include a lifetime information in the beacon as taught by Suzuki to the beacon signal of Nishikawa-Elliott to provide stability for continuing communication without causing interferences (Suzuki: col. 2 lines 41-45).

Claims 7, 15 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and Garcia-Luna-Aceves et al (US 2002/0080768 A1, Garcia) and in further view of Suzuki et al (US 5652752, Suzuki).

Claim 7: Nishikawa, in combination with Elliott and Garcia, teaches the collision cancellation notification; yet Nishikawa, in combination with Elliott and Garcia, do not expressively mention it "includes a lifetime of the collision cancellation notification in the collision cancellation notification, and wherein the second radio communication device and the third radio communication device end the relay when the lifetime has expired." Suzuki teaches a frame that includes a lifetime of the collision cancellation notification in the collision cancellation notification (col. 11 lines 2-3: time-out means), and wherein the second radio communication device and the third radio communication device end the relay when the lifetime has expired (col. 11 lines 3-6: suspending transmission of pilot signals at time-out). It would have been obvious to one of ordinary skill in the art when the invention was created to include a lifetime information in a notification as taught by Suzuki to the collision cancellation notification signal of Nishikawa-Elliott-Garcia to provide stability for continuing communication without causing interferences (Suzuki: col. 2 lines 41-45).

Claims 15 and 25: see claim 7 as similar concepts are presented.

Claims 5 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and in further view of Watanabe et al (US 6791996 B1, Watanabe).

Claim 5: Nishikawa-Elliott teaches the radio communication method according to claim 1; Nishikawa-Elliott does not very expressively mention wherein communication is prohibited in the first radio communication device, the second radio communication device and the third radio communication device during the time from transmission or reception of the collision notification until the reception of a beacon of a transmission destination radio communication device at the new time slot. Watanabe shows wherein communication is prohibited in the first radio communication device, the second radio communication device and the third radio communication device during the time from transmission or reception of the collision notification until the reception of a beacon of a transmission destination radio communication device at the new time slot (fig. 13: Station 2 and Station 3 do not establish call-connection acknowledgements 202 until time-slot change instructions 213 have been sent to Station 2 and Station 3). It would have been obvious to one of ordinary skill in the art when the invention was created to implement the step of prohibiting communication until reception of notification at new time slot as taught by Watanabe to the collision detection scheme of Nishikawa-Elliott to allow contention-free transmission based on priority of stations.

Claim 23: see claim 5.

Claims 17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and Suzuki et al (US 5652752, Suzuki), applied to claims 20 and 21, and in further view of Ben-Michael et al (US 5339313, Ben).

Claim 21: Nishikawa, in combination with Elliott and Suzuki, teaches the radio communication method according to claim 2; yet Nishikawa, in combination with Elliott and Suzuki, does not specifically mention "wherein the first radio communication device also includes a device ID for identifying itself in the collision notification, and wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are the same they give preference to the notification whose lifetime is larger." Ben teaches a concept of wherein the first radio communication device also includes a device ID for identifying itself in the collision notification, and wherein when the second radio communication device and the third radio communication device receive collision notifications whose device IDs are the same they give preference to the notification whose lifetime is larger (col. 3 lines 54-58: larger backoff client has higher priority). It would have been obvious to one of ordinary skill in the art when the invention was created to modify the preference scheme of Nishikawa, in combination with Suzuki, to give preference to the notification whose lifetime is larger as taught by Ben to guarantee successful transmission and lowering chances of further collision (Ben: col. 3 lines 31-39).

Claim 17: see claim 21.

Claim 22: see claim 4.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishikawa (US 2004/0264425 A1) in view of Elliott (US 6963747 B1) and in further view of Fike, Jr et al (US 6061737, Fike).

Claim 29: Nishikawa-Elliott teaches the radio communication method according to claim 1, wherein the first to the third radio communication device transmit a beacon including a network ID for identifying the radio network to which the device belongs (Nishikawa, [0087] lines 4-7: MAC address / TX.addr); yet, Nishikawa-Elliott does not very expressively mention "wherein when they receive a beacon including a beacon transmission period which overlaps with their beacon transmission period, the radio communication device having the network ID chosen according to a previously prescribed rule deciding between the two in the case where the network ID of the

beacon is larger and in the case where the network ID of the beacon is smaller than its own network ID, performs the collision notification." Fike teaches when they receive a beacon including a beacon transmission period which overlaps with their beacon transmission period (col. 4 lines 42-45: arbitration / contention), the radio communication device having the network ID chosen according to a previously prescribed rule deciding between the two in the case where the network ID of the beacon is larger and in the case where the network ID of the beacon is smaller than its own network ID, performs the collision notification (col. 4 lines 47-52: higher priority identification signal… collision… jamming). It would have been obvious to one of ordinary skill in the art when the invention was created to use network ID as a factor to prioritize stations as taught by Fike to the beacon transmission scheme of Nishikawa-Elliott to avoid collision.

Allowable Subject Matter

Claim 8: Nishikawa, in combination with Garcia and Suzuki, teach the radio communication method according to claim 7, wherein the first radio communication device also includes a device ID for identifying itself (see claim 7); yet, not specifically "in the collision cancellation notification, and wherein when the second radio communication device and the third radio communication device receive a collision cancellation notification whose device ID is the same, they delete the setting of the lifetime which has been given by collision notification in the case where the lifetime of the collision cancellation notification is larger than the lifetime of the collision notification." Thus, claim 8 is deemed to be non-obvious over the combination of prior arts.

Claim 9 depends on claim 8 and thus, is deemed to be non-obvious over prior art of record as well.

Claim 26: Nishikawa, in combination with Garcia and Suzuki, teach the radio communication device according to claim 25, wherein the frame of the collision cancellation notification also includes a device ID for identifying the device ([0087] lines 4-7: MAC address / TX.addr); yet not particularly "wherein when said frame constructing unit receives a collision cancellation notification whose device ID is the same, it discards the record of the collision notification in the case where the lifetime of the collision notification is larger than the lifetime of the collision cancellation notification." Thus, claim 26 is deemed to be non-obvious over the combination of prior arts.

Claim 27 depends on claim 26 and thus, is deemed to be non-obvious over prior art of record as well.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Wong whose telephone number is 571.270.1780. The examiner can normally be reached on Monday through Friday 8:30 am - 6:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571.272.3174. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800.786.9199 (IN USA OR CANADA) or 571.272.1000.

/Xavier Szewai Wong/
x.s.w
23rd February 2010

/Kevin C. Harper/
Primary Examiner, Art Unit 2462